

Corporate governance and risk exposure of banks in Nigeria.

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Key words

Corporate Governance, Operating Risk, Block Holdings, Board Composition, Block holdings, Directors Interest, Leverage.

Abstract

The study examines the extent to which good corporate culture can mitigate against exposure to risk. The Central Bank of Nigeria (apex regulatory banking body in Nigeria) has in recent time focus its policies on minimizing exposure to risk by banks operating in Nigeria. Different measures –regulatory, cyclical, financial and operational standards and modification of Corporate Governance code were done to sanitize the financial sector particularly the banking industry. The study argued that risk exposure is beyond that of a country but financial dependency and global chain of financial institutions can to a certain extent be a big factor that will continue to expose Nigerian banks to international risk as against country risk alone. The paper attempted to model corporate governance mechanisms and level of risks using panel data logit regression. The empirical results obtained show that among corporate governance mechanisms studied; Board Composition, Audit Quality and Capilisation have significant inverse relationship with risk. Whereas, other variables in the model though not significant statistically, reveals also a negative association. The aggregate results explained effectiveness of corporate governance in reducing risk exposure. The result is valuable as it is a signaled to the regulators and corporate firms' managers among other interested users of accounting information of the importance of having good corporate culture.

Introduction

Concern about governance of corporate bodies has dominated accounting and finance literature since Enron's saga. The concern was again triggered by 1998 global economic crisis and fall of leading world financial bodies. Furthermore this concern will continue to be in the fore front of academic discuss in as much as corporate entities continue to default or perform poorly.

Recently European financial institutions and some selected countries were subjected to credit downgrading notable among are: Greece, Spain, Italy and some U.K. banks. In U.S., were the hub of global financial market and transactions is domain, Standard and Poor rating downgraded U.S. stock form triple 'A' rating. This has cause a greater concern by the world financial players. More importantly as many countries financial institutions rely heavily on U.S. financial institutions.

As the interconnections of world financing transactions continue to increase with advancement in Information and communication Technology (ICT) and trade liberalization and no financial institution is immune to default. This creates a greater concern by regulators and investors on the effectiveness of governance mechanisms as preventive measures towards default and collapse.

Recently in Nigeria there is wide spread of financial malfeasances in financial service sector which led to declaration of many banks as distress and takeovers and mergers were at the highest pick in the history of financial service sector of the country. The apex banking regulatory body, central Bank in Nigeria (hence forth, CBN) embarked on second turnaround since 1998 crises. Measures ranging from bail outs, force merger, takeovers, liquidation, tight regulatory supervision and enforcement of new corporate governance code are in vogue. The current code of corporate governance emphasizes on risk management and disclosure of risk management strategy by individual banks and its group. However despite these stringent measures, the financial service sector with banks at the centre continues to face potential distress and default. The attributable factors to this are that of corporate mismanagement and inadequate capitalization, while others related the high incidence of poor performances to international risk exposure.

Viewing firm as nexus of relationship among different stakeholders (Jensen & Fama, 1983), there exist a potential conflicts among the stakeholders on the issue of risk. Managers may like to go for assets that yield higher return in short run to get higher compensation. On the contrary share holders will be of much interest on steady return with minimum risk. In quest to balance these two conflicting interest, regulatory authorities are in search for bench mark of best governance practices. That is optimum governance mix and structure that will provide higher return with minimum bearable risk and steady sustainable long run growth of a firm. Therefore, studying relationship between corporate governance mechanisms and their influence on risk is imperative.

Against the above backdrop the study seeks to find relationship that exist between corporate governance variables; and operating risk measured as return on asset variability.

Theoretical literature and Evidence

Empirical literature provides evidence that higher levels of corporate governance increase disclosure of financial information (Chen and Jaggi 2000; Eng and Mak 2003), enhance the quality of reporting and contribute to the reduction of information asymmetry between managers and capital providers (Lang and Lundholm 2000; Core, Holthausen, and Larcker 1999). However parties to financial Lenders undertake the task of monitoring to assess the borrower’s risk position which centers on default and information risk. The scrutiny of intermediated debt provides alternative governance that reduces the need for a formal corporate governance structure (James 1987; Leland and Pyle 1977; Bhattacharya and Chiesa 1995; Diamond 1984; Berger and Udell 2002; Fama 1985).

Previous literature has identified that risk assessment has two core aspects which include default risk and information risk (Ashbaugh-Skaife et al. 2006; Francis, LaFond, Olsson, and Schipper 2004). However operating risk is considered in this study as vital for investment decision, as it shows how mindful or otherwise shareholders are with firms resources.

Agency conflicts between managers and stakeholders increase the variance in expected cash flows thereby increasing default risk (Bhojraj and Sengupta 2003; Ashbaugh-Skaife et al. 2006). Managers that are focused on advancing their self-interest are likely to engage in shirking, over-consumption of perquisites, empire building and unprofitable investments in projects that yield negative net present value (Sengupta 1998; Shleifer and Vishny 1997; Dechow and Sloan 1991; Jensen and Meckling 1976; Farinha 2003; Bhojraj and Sengupta 2003; Fan 2004). The adverse effects of self-seeking managerial behaviour result in reducing the company’s expected cash flows and increasing default risk (Sengupta 1998; Ashbaugh-Skaife et al. 2006; Ashbaugh-Skaife and LaFond 2006; Bhojraj and Sengupta 2003; Jensen and Meckling 1976).

In a cross sectional study Becker *et al* (1998) & Francis *et al* (1999), reported that higher quality audit is associated with lower incidence of accounting error. On the other hand, Defond & Jian Balvo (1991), document lower incidence of accounting error relative to lower quality of audit.

Hypothesis and Model Build up

Given the objective of firm of maximizing shareholders stake at optimum level of risk, managers will strive in scouting for investment that yield higher return at minimum level of risk therefore;

$$\text{Return}_t = f(\text{rk}_{t+1}, \dots, \text{rk}_{t+n}) \dots \dots \dots (1)$$

The variability of return in equation 2, of a particular firm differentiates risky firms from less risky. This variability can be measured as a standard deviation of return, simply calculated as:

$$\text{ROA}_t / \text{ROA}_t - \text{ROA}_{t-1} \dots \dots \dots (2)$$

Presence of control within and without firm could minimize the recklessness of managers in striving for higher return their by ignoring risk element. Therefore it can be hypothesized that leverage reduces risk exposure (Diamond, 1984; Anderson *et al*, 2004 & Ashburgh-Skaife *et al*, 2006)

$$\text{ROA}_t / \text{ROA}_t - \text{ROA}_{t-1} = f(\text{lev}) \dots \dots \dots (3)$$

We further hypothesized that firm with disperse holdings are likely to have dictatorial directors inscribe to maximization of return with limited concern of the level of risk than those in which have block ownership. Therefore ownership characteristics could play a vital role in decision making pertaining to risk as such is included as:

$$ROA_t / ROA_t - ROA_{t-1} = f(\text{Block Holding}) \dots \dots \dots (5)$$

Board of directors are view as economic institution that help secure agency problem (Hermalin & Weisbach) with this view, given the investment decision of firm to maximize return at optimal risk, effective board assumes to have good monitoring function and however board effectiveness depends on the ability of the board to exercise independent function. Therefore % of non executive directors to total directors is crucial in reaching independent decision.

$$ROA_t / ROA_t - ROA_{t-1} = f(B_Com_t) \dots \dots \dots (6)$$

Directors are owners by proxy, they are to ensure owners protection of interest but not always there interest could be in consonance to that of stockholders in relation to risk. In many instance directors would like to see higher return investment there by negating the risk element. Furthermore, outside control from the firm like audit quality could be one of the deterrent forces to reduce excessiveness of the board. Therefore it can be hypothesized that both directors ownership and audit quality can exact influence on the level of risk of a firm by increasing monitoring and control function (Berger *et al*, 1997).thus:

$$ROA_t / ROA_t - ROA_{t-1} = f(DI, AQ) \dots \dots \dots (7)$$

Another variable of interest that could have a direct bearing on the risk is Share holder's capitalization a measure of size as well as commitment of owners in a given venture. In Nigeria the Banking sector has being subjected to different increases in capital requirements to boost size and provide automatic shock observer in case there is potential crisis. Capital base is assumed to make a bank to be sound and absorbed any shock. This is in line with the theory of too big to fail. Thus, capital represented by equity is incorporated in the model. Included in the model also is crises period to test the sensitivity of Global crises to financial service sector in Nigeria.

$$ROA_t / ROA_t - ROA_{t-1} = f(CAP, Crises) \dots \dots \dots (8)$$

Equation 1 -8 can be decomposed into a single linear regression model as thus:

$$Y = \alpha_0 + \beta_1 BC + \beta_2 AQ_{it} + \beta_3 Lev_t + \beta_4 BH_{it} + \beta_5 Cl_{it} + \beta_6 CAP_{it} + \beta_7 CR_{it} + \mu_{it} \dots \dots (9)$$

Sample Data Methodology

The study employs panel data from 2005-2009 for thirteen Banks listed on the Nigerian Stock market out of twenty one within the period of study. The thirteen were arrived at based on availability of full financial data within the period of study and corporate governance disclosure. The whole thirteen banks data pass normality test and were included in the sample. Using Stata soft ware the sample was subjected to panel regression analysis to empirically determines the relationship between corporate governance mechanisms and operating risk. The variables were proxied as follows:

Variables	Proxies
Dependant Variable: Operating Risk	Standard deviation of return dichotomized between low and high risky firms paneled by 1,0
Independent Variables: Leverage	Debt/Debt+ Equity
Block holdings	% distribution of holdings
Directors interest	Directors own shares/total shares
Board Compositions	Non Executive directors/total directors
Audit Quality	Pseudo variable. Rep. 1 for Big 5 Audit firm, 0 otherwise.
Capitalisation	Total Share Holders fund
Crises	Paneled by 1, 0

Panel regression was run using Logit regression on the following model:

$$Y = \alpha_0 + \beta_1 BC + \beta_2 AQ_{it} + \beta_3 Lev_t + \beta_4 BH_{it} + \beta_5 Cl_{it} + \beta_6 CAP_{it} + \beta_7 CAP_{it} + \mu_{it} \dots \dots \dots (8)$$

The u_i in the above model is expected to follow normal distribution, econometrically written as:

$$E(u_i) = 0, \dots \dots \dots (9)$$

$$E[u_i \cdot E(u_i)]^2 = E(u_i^2) = \sigma^2 \dots \dots \dots (10)$$

$$E[u_i u_j] = 0 \text{ and } i \neq j \text{ compacted as } : U_i \sim N(0, \sigma^2) \dots \dots \dots (11)$$

To achieve normality assumption in eq 11, jaque bera statistcss was run.

Secondly, as presence in most panel regression the error term could follow an unequal spread which may lead to violation of regression assumption:

$$Var(u_i/x_i) = \sigma^2_i \dots \dots \dots (12)$$

With the aid of Fixed and Random effect the assumption in eq 12 was satisfied.

Given the regression equation in 8;

$$Y = \alpha_i + \beta_1 BC + \beta_2 AQ_{it} + \beta_3 Lev_t + \beta_4 BH_{it} + \beta_5 CI_{it} + \beta_6 CAP_{it} + \beta_7 CAP_{it} \mu_{it} \dots \dots \dots (13)$$

Y is conditional 1 if firm is risky and 0 otherwise; therefore, the conditional probability is given as:

$$Pr(y_{it} = 1, 0/X) \dots \dots \dots (14)$$

In running the (8) above first OLS was used. Since we expect:

$$E(y_i = 1, 0/x_1 \dots \dots \dots) \dots \dots \dots (15)$$

We put a restriction of the coefficient of $x_1 \dots \dots \dots x_7$ as:

$$0 \leq E(y_{it}/x_1 \dots \dots \dots x_7) \leq 1 \dots \dots \dots (16)$$

Non fulfillment of (8) led to run second regression using LP logit model.

The statistical results and robustness test was presented and discussed in the next section, as well as economic criterion of the results.

Empirical Results and Discussions:

This section provides empirical results gathered from Stata output and discussion of results based on the existing literature submission in the area.

Table 5.1. Summary of STATA Logit Regression output:

Variables	Coefficients	pvalues
B_COM	-.283	.06
AuD_Q	-1.8	.05
LeV	-.61	.60
Crises	.86	.24
Dir_INT	-1.2	.19
Own_CONS	1.13	.34
Capitalisation	-1.07	.02
R ²	22%	
LR ²	19.66	
Prob.	.006	
Hosmer- lomeshow(Prob)	.40	

The model in equation 8 given all the assumptions of logit regression the model is fitted at 1% level of Significant an indication of satisfying based linear unbiased Estimator (BLUE). The pseudo R² provides a little proof of the fitness of the model indicating that the variation in Risk was only 22% explained by the regressors. As it's normal in many logit analyses pseudo R² used to be small and to further test the fitness of the model Hosmer- lomeshow test was conducted. The null hypothesis of the test reads "the model is fitted". As shown in table 5.1 the probability of the test is not significant, so we can't reject the null hypothesis of fitness of the model.

As shown in table 4.1. Board composition, Audit Quality and Capilisation reveals significant negative relationship with risk exposure as expected initially. Other variables in the model though reveal no significant relationship, but a meaningful direction of relationship was recorded; leverage, crises, Directors interest and Block Holdings.

Board composition a metric which shows independence of the board measured as proportion of non executive directors to total directors, reveals a negative relationship, interpreted as the proportion of independent directors increases the lower the risk exposure. This conforms to study of Ashbaugh-Skaife *et al* (2006). Secondly, capital base a metric which seek to show extent of owners commitment and size of an undertaken shows a negative relationship this indicates that size doesn't play a pivotal role in reducing risk. Obviously contrary to assumption of policy makers in Nigeria, that increasing capitalization will

reduce unfair banking practices, recklessness and risk in the industry based on too big to fail theory failed to be right. Decision to invest in risky project has no discrimination to size, however bigger firms may enjoy economic of scale to absorbed certain risk than smaller ones.

The Quality of Auditors measured as a dichotomy between Big Audit firms and Non Big firms shows a negative relationship with risk. The result is striking as it reveals poor quality increases risk and vice versa. This conforms with cross sectional study results of Becker et al(1998) & Francis et al (1999), and contradicts the findings in Defong & Jian Balvo(1991) who documents lower incidence of accounting error relative to lower quality.

Leverage shows an inverse account with risk. Though the result was not significant, the negative sign on the coefficient of leverage indicate firm with high exposure of risk are vulnerable with low debt financing. This finding conforms to Boughes *et al* (2006) who documents the same results in U.S. contrary to Diamond (1984), who opines that riskier firms in U.S. seek private debt. Similarly, Ownership Concentration a metric which seeks to measure the visibility of owners recorded a negative relationship with risk. This could be interpreted as higher concentration reduces risk and possibly vice versa.

Summary and conclusion

The thrust of the paper is to find out the extent of influence of selected corporate governance mechanisms (Board related, Equity related and control related) on level of accounting of risk exposure of banks in Nigeria. Board composition is the board related mechanism and leverage, ownership concentration, Audit Quality and Directors interest are considered monitoring mechanisms. Capitalisation is regulatory mechanism to promote sound banking. The results show a significant inverse relationship of Board Composition, Audit quality and Level of Capitalisation on risk exposure. While on the other side though not significant from statistical point of view, but from practical point of view point meaningful, Directors Interest shows an inverse relationship, Ownership Concentration and Crises reveals positive relationship. On aggregate the findings reveal a significant relationship between corporate governance and level of operating risk exposure.

As a matter of policy input, regulatory authorities and other stake holders of a concern should strengthen and ensure compliance with corporate governance code and best practice to reduce risk exposure.

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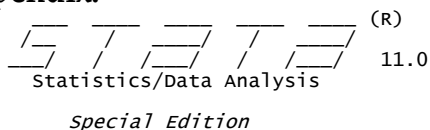
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Abbreviations:

Rk: Risk
 ROA: Return on Asset
 DI: Directors Interest
 AQ: Audit Quality
 B_COM: Board Composition
 CAP: Capitalisation

Appendix:



Special Edition

11.0

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 StataCorp
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 college station, Texas 77845 USA
 800-STATA-PC <http://www.stata.com>
 979-696-4600 stata@stata.com
 979-696-4601 (fax)

. logit rd bc auditq lev crises dir equity blockh

Iteration 0: log likelihood = -44.236338
 Iteration 1: log likelihood = -34.516991
 Iteration 2: log likelihood = -34.404785
 Iteration 3: log likelihood = -34.404578
 Iteration 4: log likelihood = -34.404578

Logistic regression

Number of obs = 64
 LR chi2(7) = 19.66
 Prob > chi2 = 0.0063
 Pseudo R2 = 0.2223

Log likelihood = -34.404578

rd	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
bc	-.2834865	.1549427	-1.83	0.067	-.5871686	.0201956
auditq	-1.82795	.9384298	-1.95	0.051	-3.667238	.0113386
lev	-.6186421	1.208853	-0.51	0.609	-2.98795	1.750666
crises	.8629617	.7385667	1.17	0.243	-.5846023	2.310526
dir	-1.209262	.9372641	-1.29	0.197	-3.046266	.6277418
equity	-1.07e-08	4.71e-09	-2.26	0.024	-1.99e-08	-1.43e-09
blockh	1.134942	1.204251	0.94	0.346	-1.225346	3.495229
_cons	2.750191	1.041386	2.64	0.008	.7091132	4.79127

. estat gof, group(10)

Logistic model for rd, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

number of observations = 64
 number of groups = 10
 Hosmer-Lemeshow chi2(8) = 8.25
 Prob > chi2 = 0.4095

HO: THE DATA FIT THE MODEL WELL (GOF TEST)